In [1]:
```
# Import necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import warnings
from sklearn.cluster import KMeans
```

In [2]:
```
warnings.filterwarnings('ignore')
```

In [3]:
```
# Generate synthetic dataset for vehicles
np.random.seed(0)
data_size = 300
data = {
    'Weight': np.random.randint(1000, 3000, data_size),
    'EngineSize': np.random.uniform(1.0, 4.0, data_size),
    'Horsepower': np.random.randint(50, 300, data_size)
}
df = pd.DataFrame(data)
```

In [4]:
```
# No labels are needed for unsupervised learning
X = df
```

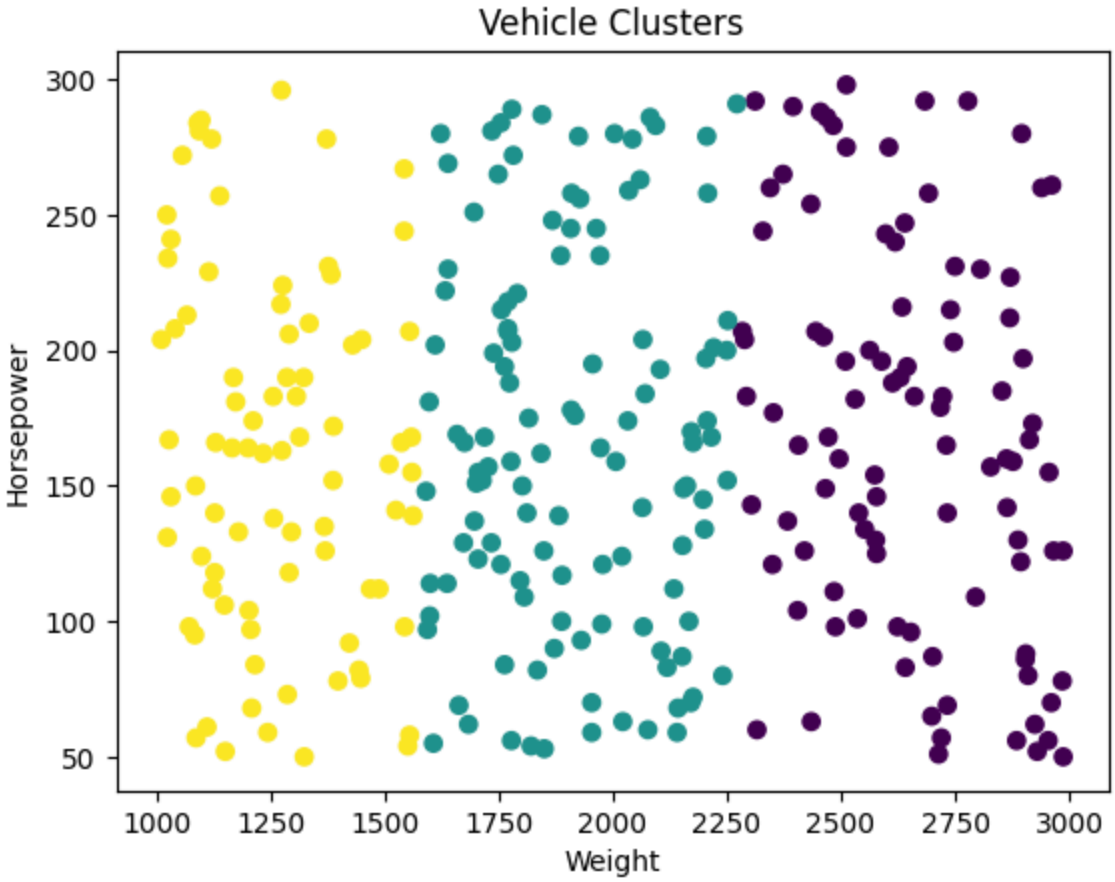
In [5]:
```
# Perform KMeans clustering
kmeans = KMeans(n_clusters=3, random_state=42)
kmeans.fit(X)
```

Out[5]:

▾ KMeans

▶ Parameters

In [6]:
```
# Plotting the clusters
plt.scatter(df['Weight'], df['Horsepower'], c=kmeans.labels_)
plt.xlabel('Weight')
plt.ylabel('Horsepower')
plt.title('Vehicle Clusters')
plt.show()
```


Vehicle Clusters
Horsepower
Weight
300
250
200
150
100
50
1000
1250
1500
1750
2000
2250
2500
2750
3000